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**Ellis**

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(54) **SYSTEMS AND METHODS FOR PROVIDING A SCAN TRANSPORT BAR**

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(52) **U.S. Cl.** ..... **725/38**; 725/37; 725/39; 725/43; 725/52; 348/569; 348/570

(58) **Field of Classification Search** ..... 725/38, 725/52

See application file for complete search history.

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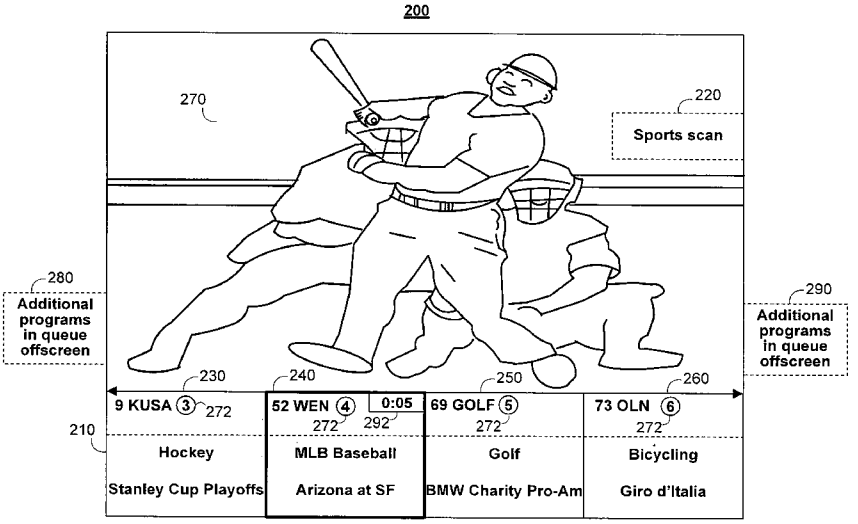
(57) **ABSTRACT**

A scan transport bar is disclosed. The scan transport bar includes a number of cells indicating programs within the scan. The scan transport bar is displayed with the currently-tuned program. The scan transport bar includes tuning sequence numbers for allowing users to easily tune to programs within the scan. A countdown timer is also provided that indicates the amount of time until the next tune in the scan.

**87 Claims, 8 Drawing Sheets**



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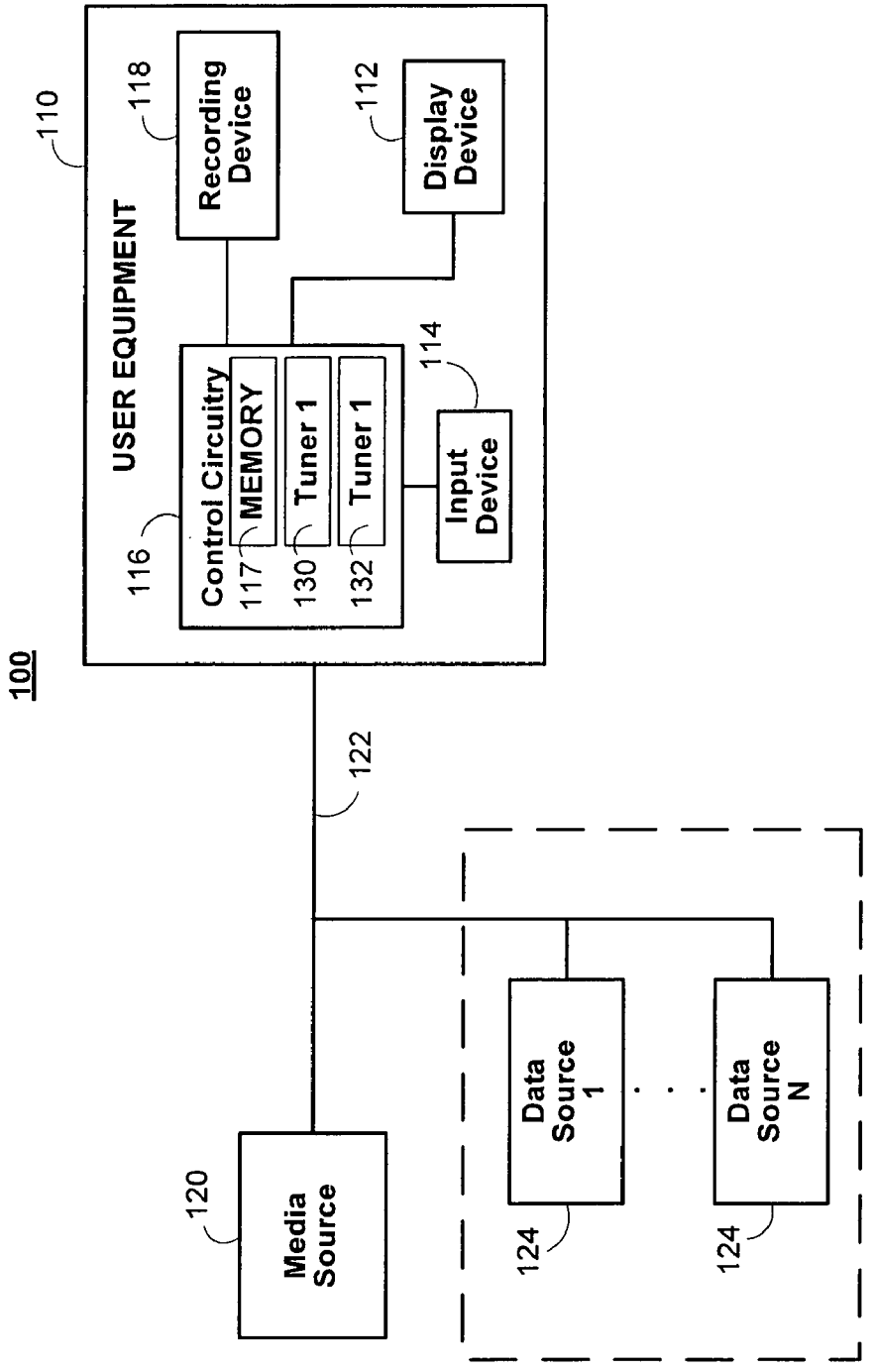

100
110
USER EQUIPMENT
118
Recording Device
112
Display Device
114
Input Device
116
Control Circuitry
117
MEMORY
130
Tuner 1
132
Tuner 1
122
120
Media Source
124
Data Source 1
124
Data Source N

FIG. 1

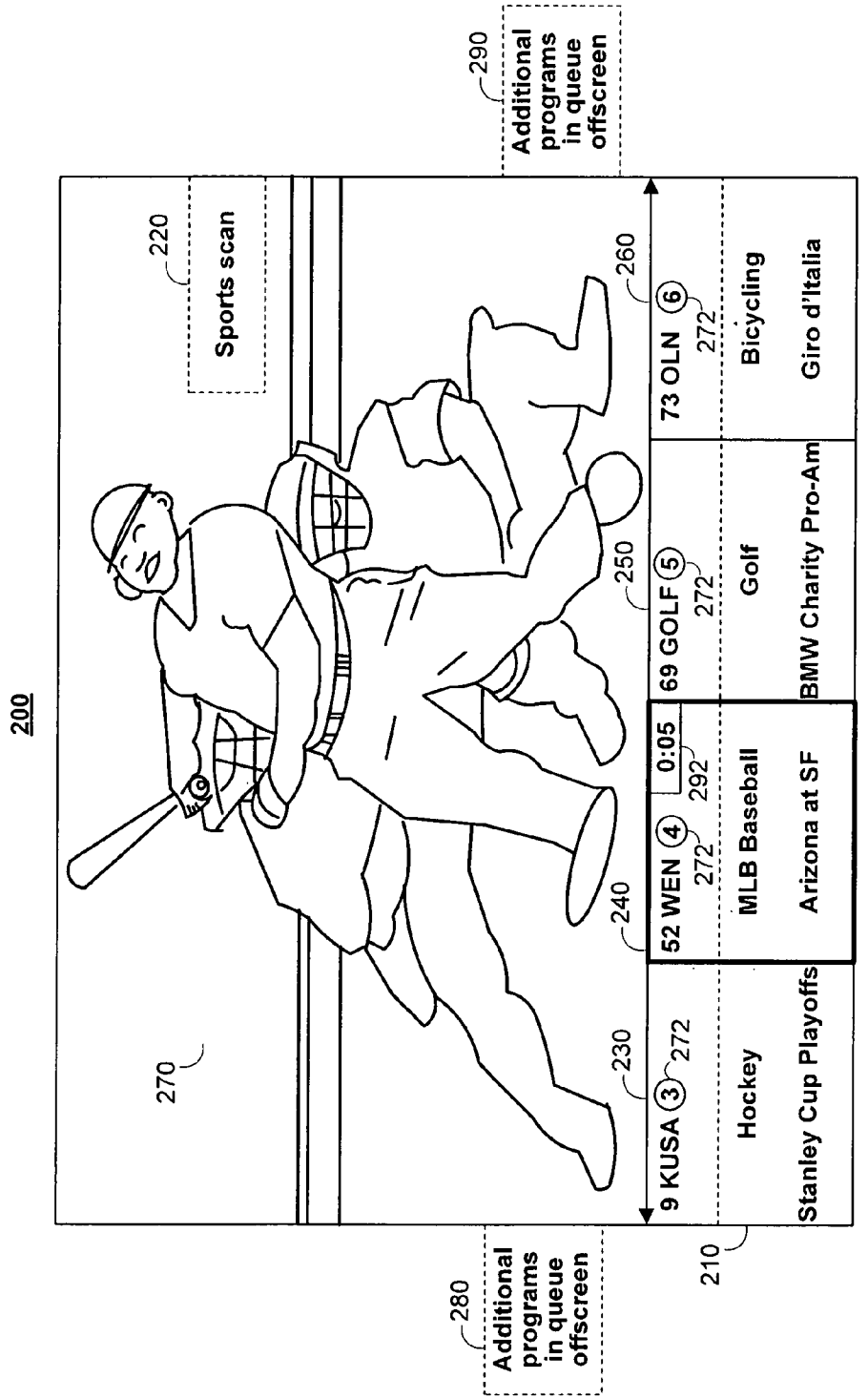

200
270
220
Sports scan
290
Additional programs in queue offscreen
260
250
240
230
9 KUSA 3 272
52 WEN 4 272
0:05 292
69 GOLF 5 272
73 OLN 6 272
Hockey
MLB Baseball
Golf
Bicycling
Stanley Cup Playoffs
Arizona at SF
BMW Charity Pro-Am
Giro d'Italia
210
280
Additional programs in queue offscreen

FIG. 2

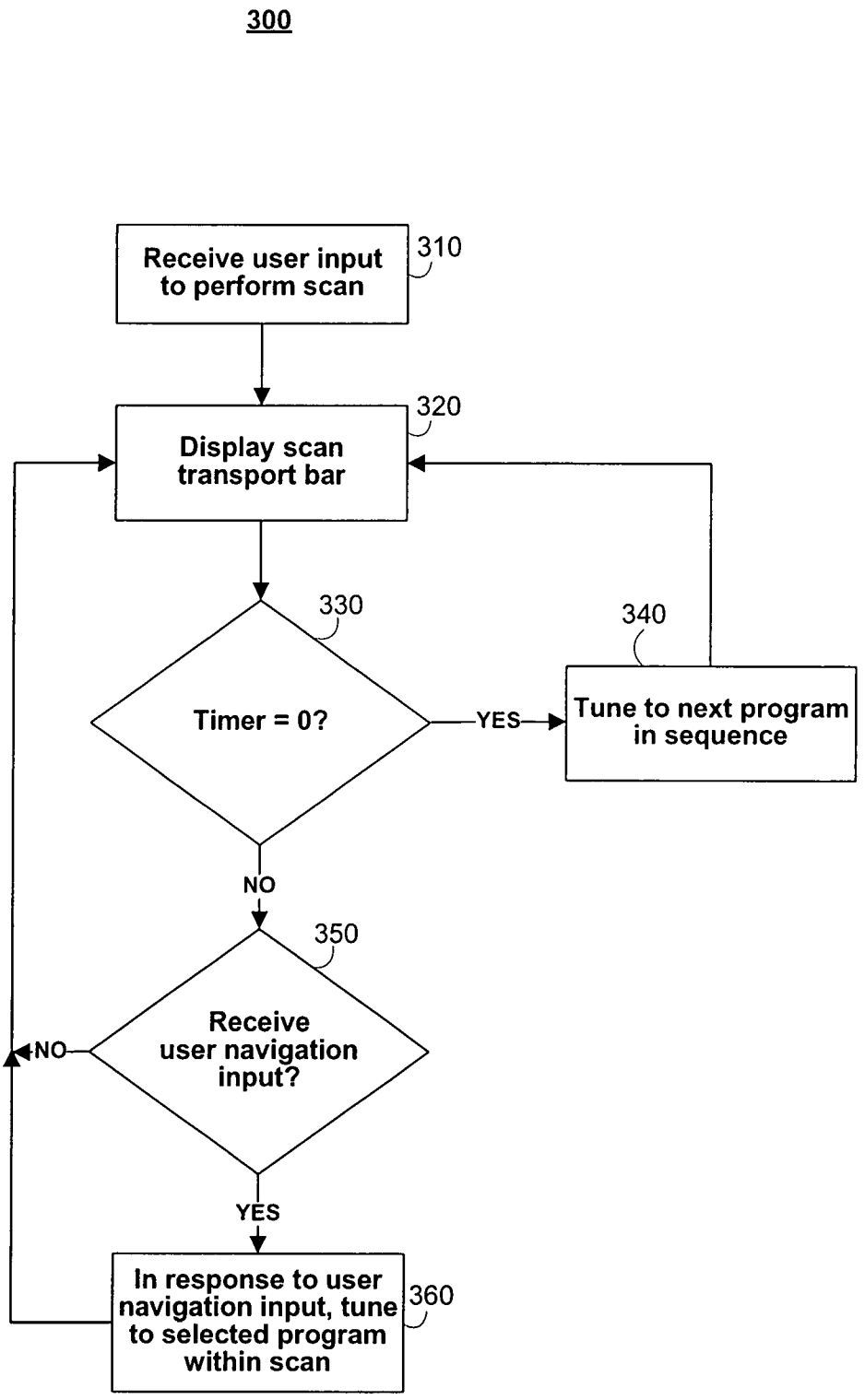

300
Receive user input to perform scan
310
Display scan transport bar
320
Timer = 0?
330
YES
Tune to next program in sequence
340
NO
Receive user navigation input?
350
NO
YES
In response to user navigation input, tune to selected program within scan
360

FIG. 3

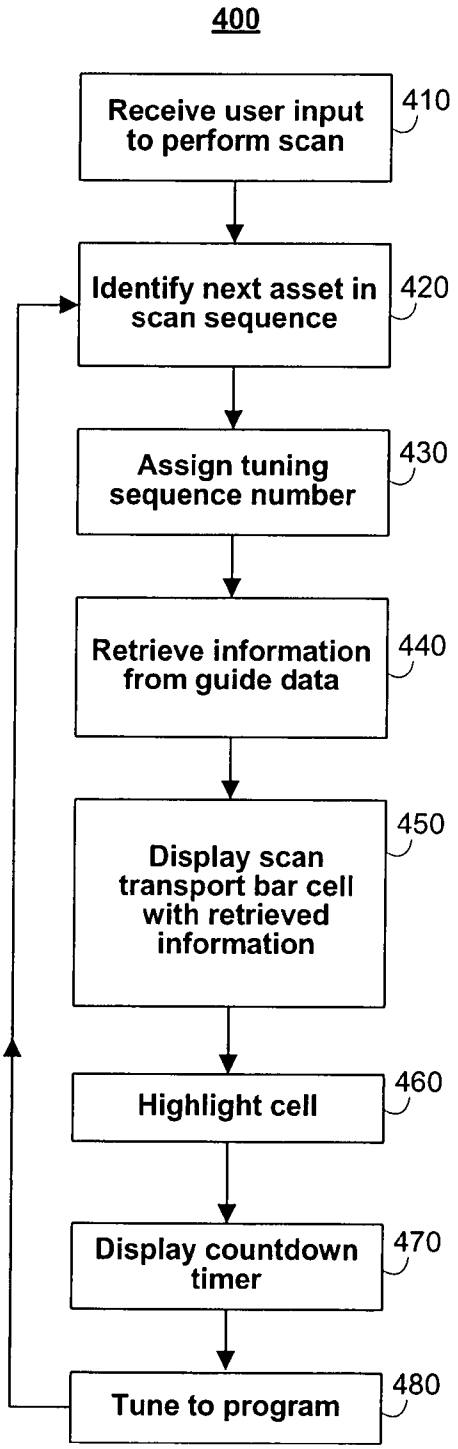

400
Receive user input to perform scan
410
Identify next asset in scan sequence
420
Assign tuning sequence number
430
Retrieve information from guide data
440
Display scan transport bar cell with retrieved information
450
Highlight cell
460
Display countdown timer
470
Tune to program
480

FIG. 4

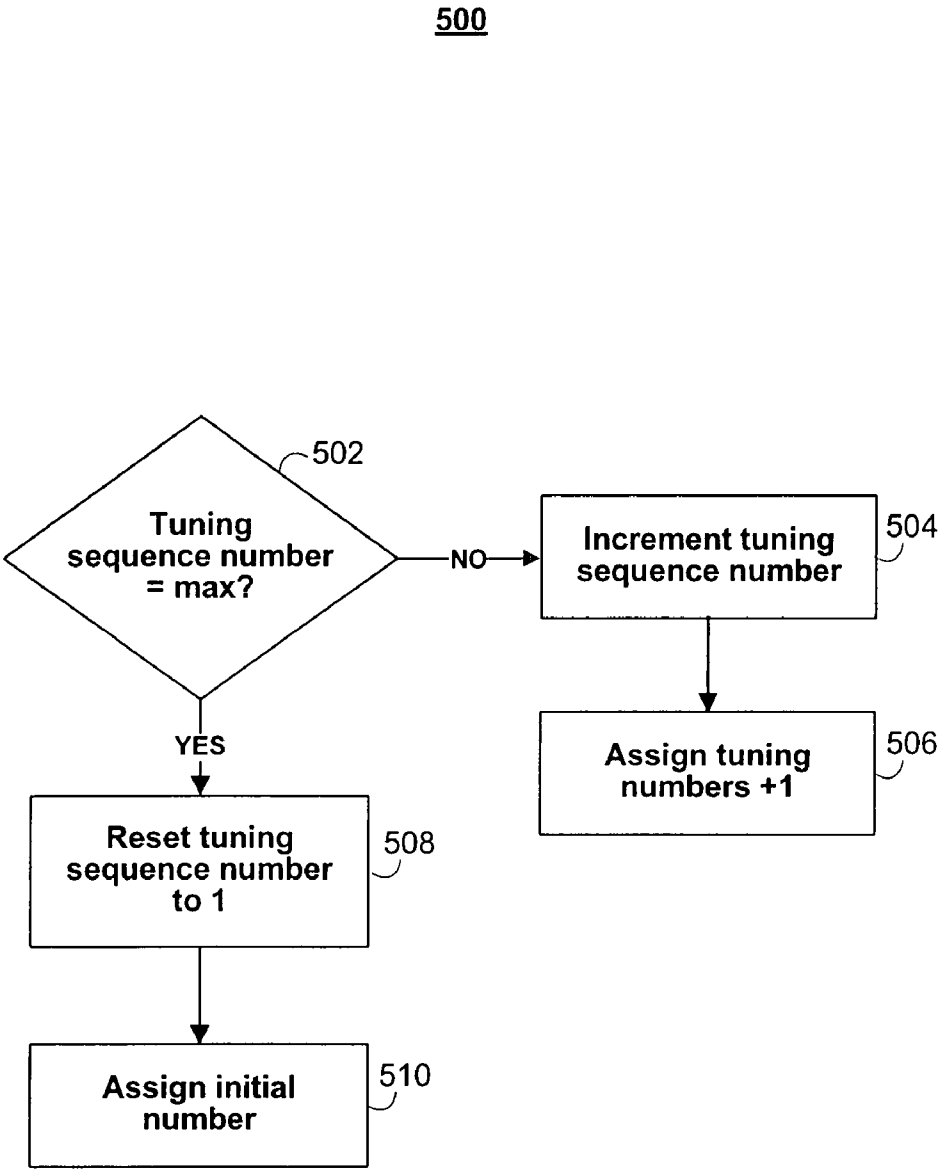

500
502
Tuning sequence number = max?
NO
YES
504
Increment tuning sequence number
506
Assign tuning numbers +1
508
Reset tuning sequence number to 1
510
Assign initial number

FIG. 5

FIG. 6A

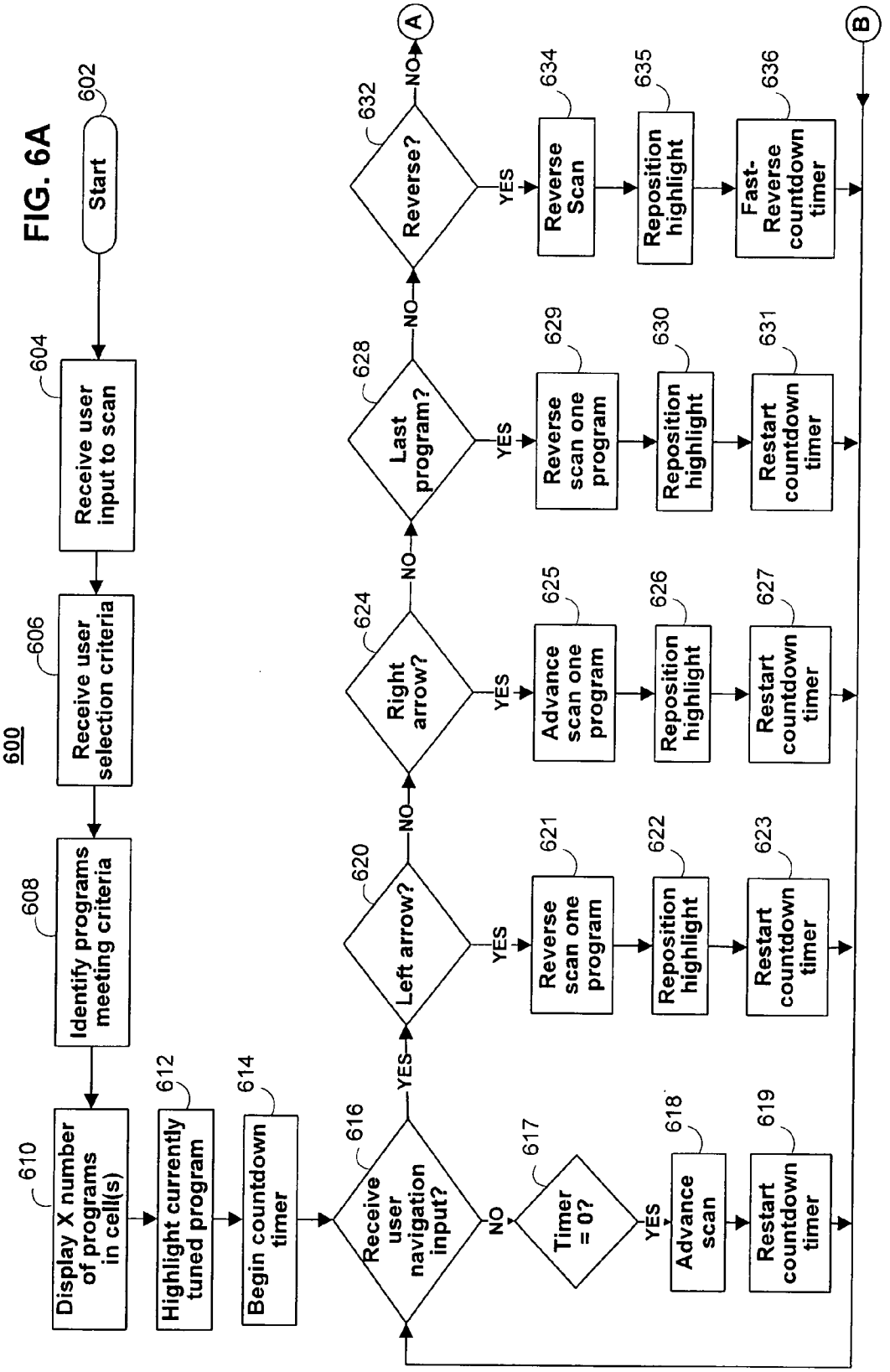

600
Start
602
Receive user input to scan
604
Receive user selection criteria
606
Identify programs meeting criteria
608
Display X number of programs in cell(s)
610
Highlight currently tuned program
612
Begin countdown timer
614
Receive user navigation input?
616
Timer = 0?
617
Advance scan
618
Restart countdown timer
619
Left arrow?
620
Reverse scan one program
621
Reposition highlight
622
Restart countdown timer
623
Right arrow?
624
Advance scan one program
625
Reposition highlight
626
Restart countdown timer
627
Last program?
628
Reverse scan one program
629
Reposition highlight
630
Restart countdown timer
631
Reverse?
632
Reverse Scan
634
Reposition highlight
635
Fast-Reverse countdown timer
636
YES
NO
A
B

FIG. 6B

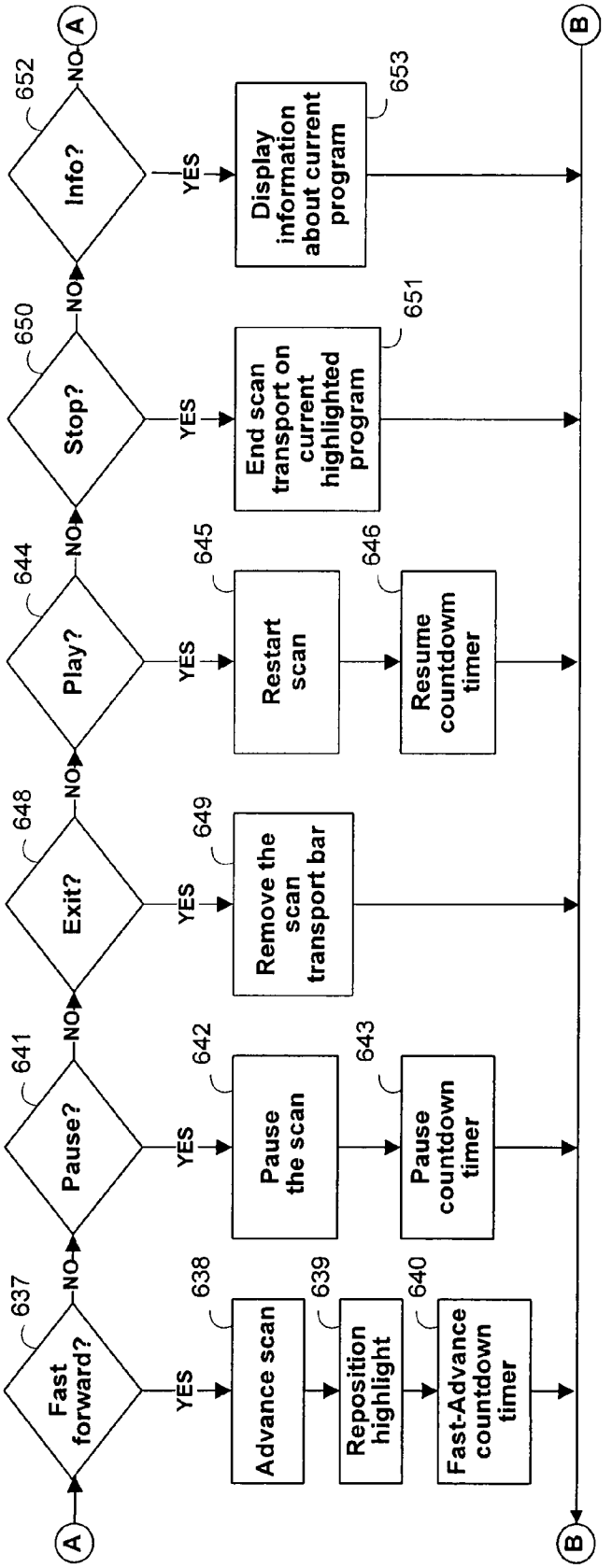
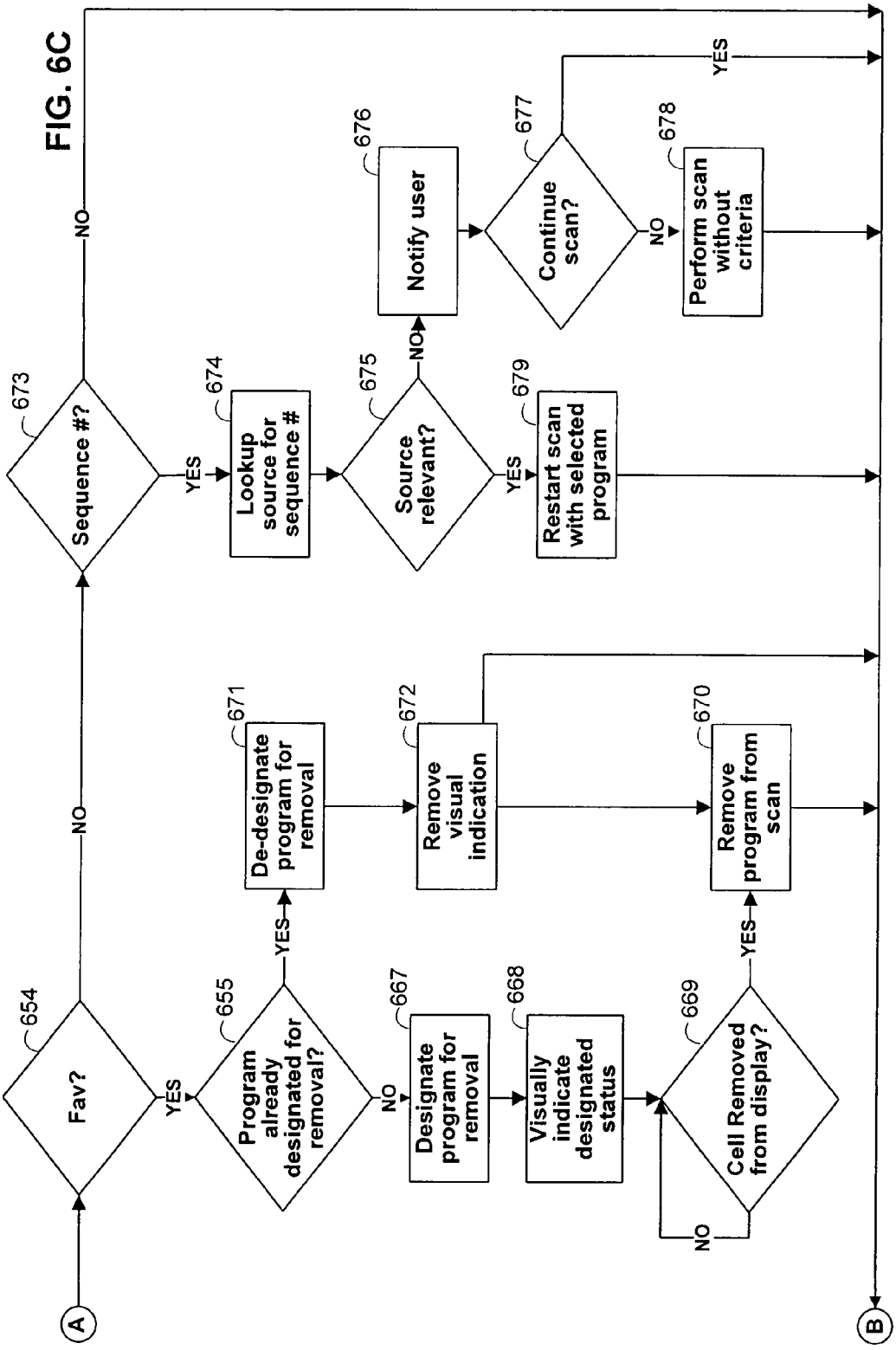

A
Fast forward?
637
YES
NO
Advance scan
638
Reposition highlight
639
Fast-Advance countdown timer
640
Pause?
641
YES
NO
Pause the scan
642
Pause countdown timer
643
Exit?
648
YES
NO
Remove the scan transport bar
649
Play?
644
YES
NO
Restart scan
645
Resume countdown timer
646
Stop?
650
YES
NO
End scan transport on current highlighted program
651
Info?
652
YES
NO
Display information about current program
653
A
B
B

FIG. 6C


A
654
Fav?
YES
NO
655
Program already designated for removal?
YES
NO
671
De-designate program for removal
667
Designate program for removal
668
Visually indicate designated status
669
Cell Removed from display?
YES
NO
672
Remove visual indication
670
Remove program from scan
673
Sequence #?
YES
NO
674
Lookup source for sequence #
675
Source relevant?
YES
NO
679
Restart scan with selected program
676
Notify user
677
Continue scan?
YES
NO
678
Perform scan without criteria
B

# SYSTEMS AND METHODS FOR PROVIDING A SCAN TRANSPORT BAR

## BACKGROUND OF THE INVENTION

This invention is directed to systems and methods for providing a scan transport bar in video entertainment systems.

Interactive media guidance applications, such as interactive television program guides, are well known in the art. One known guidance feature is a channel scan. Channel scan features generally allow users to initiate a tuning sequence that proceeds from channel to channel without requiring the user to repetitively issue channel change commands. During a channel scan, a guidance application pauses on each channel for a period of time to allow the user to see what is on. Some scans do not tune sequentially, and instead allow users to scan programs that are, for example, only of a certain category or based on user criteria. Regardless of the type of scan, users may find scanning unwieldy because, for example, there are too many channels in the scan. Thus, what is needed is a mechanism for allowing users to easily navigate within a scan.

## SUMMARY OF THE INVENTION

In accordance with the principles of the present invention, systems and methods are provided for enhanced scan navigation in interactive media guidance applications, such as interactive television program guides. The invention is an onscreen scan transport bar, provided by an interactive media guidance application, that allows users to navigate more easily within a scan while viewing contents of the scan. The transport bar includes a plurality of cells, each of which indicates a program that is part of the scan. The cells may indicate programs using any suitable approach. In some embodiments, titles, channel numbers and text descriptors of programs are used. In other embodiments, programs may be represented by graphics or video clips. An additional advantage of the transport bar is that the user is presented, and may retrieve, information about programs in the scan other than the currently tuned-to program.

Users may navigate within the scan by selecting a program from the transport bar. In some embodiments, the transport bar includes a highlight or other indicator that may be positioned on a cell within the transport bar for selection. In some embodiments, the interactive media guidance application assigns tuning sequence numbers to programs associated with cells of the transport bar. The interactive media guidance application tunes to a program in response to a user entering the tuning sequence number. The interactive media guidance application may assign tuning sequence numbers using any suitable approach. For example, numbers may be assigned uniquely to each program within a scan. Alternatively, a limited number of tuning sequence numbers may be used and reused. Such an approach, while limiting the user's ability to tune to all programs in the scan, may be more user friendly for some users as it does not require a user to attempt to remember more tuning indicators than practical. The use of tuning sequence numbers to easily navigate among assets may be used in contexts other than scanning. For example, it may be used in transport bar embodiments for navigating within DVR or VOD assets to support chaptering, or in transport bar embodiments for navigating playlists.

The transport bar may have one or more rows of any suitable number of cells. The number of cells may be chosen to, for example, accommodate different cell sizes. As the scan progresses, the cells change to indicate the current, recently viewed, and upcoming programs of the scan. For example, a single row of cells may be provided that shift from one side of the screen to the other. As the scan progresses, the cell for the program viewed earliest in the scan drops off the screen to make room for additional cells, and a cell for a current or future program appears. In approaches where multiple rows of cells are provided, a serpentine approach may be used to rotate cells much like the rotation of players on a volleyball court—one corner cell drops off as another enters and the other cells shift in an "S" pattern.

In some embodiments, the interactive media guidance application intelligently orders programs within the scan. For example, programs may be ordered based on how soon they will end. Or, as another example, programs may be sorted within the scan based on other characteristics, such as whether they are HD, how much time is remaining, and whether the program is a rerun.

The interactive media guidance application may indicate how much time remains before it tunes to the next program in the scan. For example a countdown timer may be included in the transport bar or elsewhere on the display. In some embodiments, the countdown timer is included in the cell of the current program of the scan.

The transport control bar may also provide the user with the ability to adjust the speed and/or direction of the scan. For example, on-screen or remote-control based fast-forward and rewind buttons may be provided. In response to the user selecting the fast-forward button, the interactive media guidance application speeds up the time to the next tune and, if the button continues to be pressed or selected, makes the next tune. As the fast-forward progresses, the countdown timer advances accordingly. In response to the user selecting the rewind button, the interactive media guidance application will reverse the scan and, if the button continues to be pressed or selected, will tune back to the last program in the scan. As the rewind progresses, the countdown timer reverses accordingly.

## BRIEF DESCRIPTION OF THE DRAWINGS

The above and other features of the present invention, its nature and various advantages will be more apparent upon consideration of the following detailed description, taken in conjunction with the accompanying drawings in which:

FIG. **1** is a diagram of an illustrative interactive media system in accordance with one embodiment of the present invention;

FIG. **2** shows an illustrative scan transport bar overlaid onto television programming in accordance with one embodiment of the present invention;

FIG. **3** is a flow chart of an illustrative process for allowing users to navigate a scan using a scan transport bar, in accordance with one embodiment of the present invention;

FIG. **4** is a flowchart of an illustrative process for building the initial display of the scan transport bar;

FIG. **5** is a flow chart of an illustrative process for assigning tuning sequence numbers to the programs of the scan sequence in accordance with one embodiment of the present invention;

FIGS. **6**A-C is a flow chart of an illustrative process for implementing and providing user navigation within a scan transport bar in accordance with one embodiment of the present invention.

## DETAILED DESCRIPTION

Although the embodiments described below may refer to scanning channels in broadcast digital or analog television

systems, it is to be clearly understood that the systems and methods of the invention may be used with any suitable video or audio content (e.g., on-demand or recorded content) in any suitable media system (e.g., satellite, on-demand, and IPTV system) having a defined sequence for accessing content sources.

As used herein, the term "tune" or "tuning" refers to the steps of acquiring and displaying a specific content stream or selection accessible by a user's user equipment. For traditional analog television systems, tuning may include acquiring or locking onto a particular channel carrier frequency. For digital television systems, tuning may include demodulating the digital carrier frequency, forward-error correction (FEC) decoding the demodulated transport stream (TS), demultiplexing the transport stream and filtering and separating out particular packet identifiers (PIDs). In switched digital video (SDV) systems, it may also include determining the QAM associated with a channel, or requesting a channel be switched into the system. For IPTV, tuning may include opening a socket and joining a particular multicast group. For recorded content, tuning includes locating content on a storage device (e.g., by reading a file access table (FAT) for information stored on the storage device).

As also used herein, content or channel "scanning" refers to automatically tuning through a series of content selections or channels (e.g., an automatic progression up, down, or in a random, a dynamically, or a statically determined sequence through a number of channels).

FIG. **1** shows illustrative interactive media system **100** in accordance with one embodiment of the invention. User equipment **110** receives media in the form of signals from media source **120** over communications path **122**. In practice there may be multiple media sources **120** and user equipment **110**, as well as multiple communication paths **122**, but only one of each has been shown in FIG. **1** to avoid over-complicating the drawing.

Media source **120** may be any suitable media source such as, for example, a cable system headend, satellite media distribution facility, media broadcast facility, internet protocol television (IPTV) headend, on-demand server (e.g., a traditional VOD server or a remote recording server), website, game service provider (e.g., for online gaming) switched digital video server, or any other suitable facility or system for originating or distributing media. Media source **120** may be configured to transmit signals over any suitable communications path **122** including, for example, a radio-frequency broadcast path, a satellite path, a fiber-optic path, a cable path, an Internet path, or any other suitable wired or wireless path. The signals may carry any suitable media such as, for example, television programs, games, music, news, web services, video, or any other suitable media. In some embodiments, media source **120** may include control circuitry for executing the instructions of an interactive media guidance application such as, for example an online interactive media guidance application which includes a scan feature.

User equipment **110** may include any equipment suitable for providing an interactive media experience. User equipment **110** may include television equipment such as a television, set-top box, recording device, video player, user input device (e.g., remote control, keyboard, mouse, touch pad, touch screen or voice recognition interface), or any other device suitable for providing an interactive media experience. For example, user equipment **110** may include a DCT 2000, 2500, 5100, 6208 or 6412 set-top box provided by Motorola, Inc. In some embodiments, user equipment **110** may include computer equipment, such as a personal computer with a television card (PCTV). In some embodiments, user equipment **110** may include a fixed electronic device such as, for example, a gaming system (e.g., X-Box, PlayStation, or GameCube) or a portable electronic device, such as a portable DVD player, a portable gaming device, a cellular telephone, a PDA, a music player (e.g., MP3 player), or any other suitable fixed or portable device.

In the example of FIG. **1**, user equipment **110** includes at least control circuitry **116**, display device **112**, user input device **114**, and recording device **118** which may be implemented as separate devices or as a single device.

Display device **112** may be any suitable device such as, for example, a television monitor, a computer monitor, or a display incorporated in user equipment **110** (e.g., a cellular telephone or portable music player display). Display device **112** displays the media transmitted by media source **120** over path **122**, and the displays of the interactive media guidance application. Display device **112** may also be configured to provide for the output of audio.

Recording device **118** may include a hard drive (e.g., one or more ATA, SCSI, IDE, or IEEE 1394 drives), digital video recorder (DVR), personal video recorder (PVR), or any other device capable of storing media content. Control circuitry **116** may access stored content (e.g., programs and movies) on recording device **118** and cause the content to be presented on display device **112** at any suitable time. Recording device **118** may include one or more tuners. In some embodiments, recording device **118** may be omitted.

Control circuitry **116** is adapted to receive user inputs from input device **114** and execute the instructions of the interactive media guidance application (e.g., a 68000 series processor to perform the instructions corresponding to elements of the flowcharts shown in FIGS. **3-6***c* and described below). Control circuitry **116** may include one or more tuners **130** and **132** (e.g., analog or digital tuners), encoders and decoders (e.g., MPEG decoders), processors (e.g., MIPS family processors), memory **117** (e.g., RAM and hard disks), communications circuitry (e.g., cable modem circuitry), input/output circuitry (e.g., graphics circuitry), connections to the various devices of user equipment **110**, and any other suitable component for providing analog or digital media programming, program recording, and interactive media guidance features. In some embodiments, control circuitry **116** may be included as part of one of the devices of user equipment **110** such as, for example, part of display **112** or any other device (e.g., a set-top box, television and video player).

Tuners **130** and **132** may include one or more analog or digital tuners, network sockets (for IPTV systems), MPEG encoders/decoders, or other suitable audio/video circuitry for performing a scan under the control of an interactive media guidance application executed by control circuitry **116**. Tuners **130** and **132** may also include decoding/encoding circuitry for converting over-the-air or cable analog signals to MPEG signals for storage or for decoding digital audio and video signals. The tuning and encoding/decoding circuitry may be used by user equipment **110** to receive and display, play, or record a particular television, music, or on-demand channel or any other desired audio and video content (e.g., video requested from network-based or local digital video recorders).

Control circuitry **116**, under the control of interactive media guidance application logic, may scan video by directing tuners to sequentially or successively tune, acquire, and decode any suitable content accessible by user equipment **110**. For example, user equipment **110** may include tuner **130**, a first analog tuner used to acquire analog television signals, and tuner **132**, a second digital tuner used to acquire and decode digital television signals. Control circuitry **110** may

store or buffer one or more frames of video from tuners **130** and **132** to memory **117** or recording device **118**.

In some embodiments, user equipment **110** may also include graphics circuitry (e.g., incorporated within control circuitry **116**). The graphics circuitry may include video and/or audio transcoding circuitry, one or more graphics processors, memory, and various display outputs (e.g., S-Video and composite video outputs). The graphics circuitry may also include video compression and scaling codecs or circuitry to scale the input from tuners **130** and **132** (or from some other device, such as recording device **118**) to a resolution or size other than the input's native resolution or size. For example, using the graphics circuitry, the input to tuners **130** and **132** may be displayed at a smaller size on display device **112** than their native size in order for program listings information to be presented with the tuner content on the same display screen. As another example, the graphics circuitry may present full-motion or still frame thumbnail windows corresponding to one or more tuner inputs on the same display screen. The graphics circuitry may scale one video input at a time or scale more than one video input simultaneously. For example, the inputs of both of the tuners may be scaled simultaneously so that these inputs may be displayed together on the same display screen in real-time (perhaps with program listings information, content suggestions, or other suitable information). Or, for example, cells of the scan transport bar may include video frames captured from the sources included in the scan.

In some embodiments, the interactive media guidance application may provide features to the user with a client/server approach. There may be one server for each instance of user equipment **110**, one for multiple instances of user equipment **110**, or a single server may serve as a proxy for each instance of user equipment **110**.

Any suitable number of users may have equipment, such as user equipment **110**, connected to media source **120** and data sources **124**. But for the clarity of the figure, the equipment of only a single user is shown. The equipment of the plurality of users may be connected to media source **120** and data source **124** using a cable television network, a satellite television network, a local area network (LAN), a wireless network, the Internet, or any other suitable means. In some embodiments, the equipment of the plurality of users may be connected to each other using any suitable means.

User equipment **110** may receive interactive media guidance application data (e.g., titles, descriptions, rating information, etc.) from one or more data sources **124**. Data sources **124** may provide data for a particular type of media or for a particular application. For example, one data source **124** may provide data for non-on-demand media (e.g., non-pay and pay-per-view programs), and another may provide data for on-demand media (e.g., VOD programs). Or, for example, a single data source may provide both of these types of data. For example, one data source **124** may provide data for an interactive television program guide. Another data source **124** may, for example, provide data for another interactive application (e.g., a home shopping application). In some embodiments, data sources **124** may provide data to the interactive media guidance application using a client/server approach. There may be one server per data source, one for all sources or, in some embodiments, a single server may communicate as a proxy between user equipment **110** and various data sources **124**. In some embodiments, data sources **124** may provide data as an online interactive media guidance application. In such embodiments, data source **124** may include control circuitry for executing the instructions of the online media guidance application.

Scans may be initiated by the interactive media guidance application in response to any suitable event. For example, the interactive media guidance application may receive a key or key sequence entered by the user with input device **114** (FIG. **1**) associated with a "scan" instruction, or the interactive media guidance application may receive a user selection of an appropriate option from an interactive media guidance application screen.

Upon initiating a scan, the interactive media guidance application will, in some embodiments, determine which sources should be included in the scan. In some embodiments, the interactive media guidance application may select the programs based on some criteria provided or selected by the user, or automatically employed by the interactive media guidance application. Approaches for allowing users to specify scan criteria are described, for example, in Ellis et al. U.S. Pat. No. 5,986,650, Yuen et al. U.S. Pat. No. 5,673,089, and Kunkel et al. U.S. patent application Ser. No. 11/431,143, filed May 8, 2006, which are hereby incorporated by reference herein in their entireties. For example, the interactive media guidance application may identify the programs currently available from media source **120** (FIG. **1**) using the data provided by data source **124** (FIG. **1**), and select the programs of media source **120** having data that satisfies the applicable criteria (e.g., a theme, actor, whether a program is available in HD, etc.). The programs that the interactive media guidance application selects may be currently available programs such as, for example, broadcast/satellite programs, on-demand programs, recorded programs, or any other current program. The interactive media guidance application then, in some embodiments, sets a scan sequence for the selected programs (e.g., orders the programs by channel number, start-time, end-time, program length, or proximity of program to criteria). In some embodiments, the interactive media guidance application determines all of the programs for one iteration of the scan when a scan is initiated. In other embodiments, the interactive media guidance application determines the "next" program of a scan just prior to making a successive tune.

The interactive media guidance application provides a scan transport bar for allowing a user to easily navigate within a scan. FIG. **2** shows illustrative display **200** having scan transport bar **210** overlaid onto television programming (i.e., a substantial portion of the program is simultaneously displayed with the transport bar). It should be noted that in other embodiments, the television programming may be displayed in a video window. In this example, the interactive media guidance application performs the scan in accordance with user-supplied criteria, namely "sports," as indicated by indicator **220**.

Scan transport bar **210** has a number of cells, in this example four displayed cells **230**, **240**, **250** and **260**, but any suitable number of cells may be used. Each cell includes information identifying or relating to a program in the scan, which in this example includes title, description, channel number and call letters. In some embodiments the cells may include other program-related information, or information that is independent of the program. For example, the interactive media guidance application may display information about the scan criteria, advertisements, or program listings. In embodiments where the transport bar cells contain scan criteria, indicator **220** may not be necessary.

The interactive media guidance application may build the scan transport bar **210** by displaying one cell at a time upon successive tunes until the maximum number of cells is reached. Alternatively, the interactive media guidance application initially displays the maximum number of cells. After displaying the first cell or initial group of cells, subsequent

cells may enter the display from one side, and already-displayed cells may shift right to left (or left to right) to make room for the new cell. In yet another embodiment, the scan transport bar includes multiple rows of cells. In such embodiments, a serpentine approach may be used to rotate cells much like the rotation of players on a volleyball court—one corner cell drops off as another enters and the other cells shift in an "S" pattern.

In some embodiments the scan transport bar may include a timer **292**. Timer **292** counts down the remaining time the current program will be displayed. Or, put another way, the time until the next tune occurs. When the scan timer times out (e.g., reaches zero), the interactive media guidance application tunes to the next source of the next program in the scan sequence and displays the next program in video area **270**.

In some embodiments the interactive media guidance application may allow the user to set the timer duration. For example, the interactive media guidance application may allow the user to enter a timer duration using input device **114**. In other embodiments the interactive media guidance application sets the timer duration to some predetermined default (e.g. five seconds).

After the interactive media guidance application tunes to a source (e.g., channel), displays the program, and includes a cell for the program in the transport bar, the scan length timer begins to count down. The interactive media guidance application also highlights the cell associated with the program (in this example, cell **240**).

After timer **292** counts down to zero, the interactive media guidance application also shifts the transport bar. In this example, the interactive media guidance application shifts in a new program into cell **260** (e.g., channel 75, ESPN, which carries "NFL: Giants vs. Patriots" (not shown)). The program that was in cell **260** moves into cell **250**. The program that was in cell **250** moves into cell **240**. The program that was in cell **240** moves into cell **230**. The program in cell **230** moves off screen. The interactive media guidance application keeps the highlight on cell **240**, but now the program is different. Also, timer **292** is reset. This process continues until all the programs in the scan are previewed or until the user requests the transport bar to end. In some embodiments, the scan may begin again automatically after the last program in the sequence is viewed.

Alternatively, the interactive media guidance application may shift in cells only after all the programs indicated in the current cells of the bar are displayed. In such an embodiment, the application moves the highlight and timer over to the next cell and starts the timer again in the next cell without shifting in more programs. Once all the programs are displayed for the current set of cells another set of program cells are shifted in. For example, four programs may be shifted into transport bar **210**.

At any time while the scan transport bar is displayed the user may easily navigate to a program in the scan in a number of different ways. The user may highlight a cell using navigation keys (e.g., right and left arrows) on the input device **114**. Or, the user may select a program to view in video area **270** by inputting a sequence number **272** into input device **114** (FIG. **1**). In such embodiments, the user may access additional information about programs in the scan (whether tuned or not) by highlighting and selecting cells of the transport bar. In the example of FIG. **2**, the interactive media guidance application places sequence number **272** at the tops of the cells. Alternatively, the application may put the sequence number at the bottom of the screen or anywhere else inside the cells. In response to the user inputting sequence number "three," cell **230** would become highlighted (removing the highlight from cell **240**) and the interactive media guidance application would direct tuner **130** or **132** (FIG. **1**) to tune to channel 9.

In the example of FIG. **2**, the left-most cell contains sequence number "3." This indicates to the user that the scan transport bar contained two other cells and subsequently shifted them off the screen to make room for additional cells. In other embodiments the interactive media guidance application may display indicator **280** (shown off screen in FIG. **2**) to indicate that programs of the screen have already been viewed. Additionally, the interactive media guidance application may add indicator **290** (shown off-screen in FIG. **2**) to indicate that there are more programs in the scan. In some embodiments the interactive media guidance application may display the exact number of programs currently off the screen in indicators **280** and **290** when such indicators are included in the display.

FIG. **3** shows illustrative general process **300** for providing a scan transport bar in accordance with some embodiments of the present invention. Process **300** begins at step **310**, where the application receives a user input to perform a scan. At step **320** the application displays an onscreen transport bar having one or more cells of information regarding programs on sources that are part of the scan. In some embodiments the application creates one cell at a time as the scan progresses, forming the transport bar one cell at a time. In other embodiments the application creates the transport bar multiple cells at a time (e.g., five). At step **330**, the interactive media guidance application determines whether it is time to make the next tune in the scan (e.g., by determining that countdown timer **292** (FIG. **2**) hits 0). In response to determining it is time to tune, the application directs tuner **130** or **132** (FIG. **1**) to tune to the next program in the sequence (step **340**) and returns to step **320**. At step **350** the application determines whether a user navigation input for the transport bar is received. The input may be, for example, the sequence number for a cell as illustrated in FIG. **2**, or a command positioning the highlight on another cell in the transport bar. At step **360** the interactive media guidance application tunes to the selected program, and returns to step **320**.

FIG. **4** shows an illustrative process **400** for generating the scan transport bar in accordance with some embodiments of the present invention. The process begins at step **410**, where the interactive media guidance application receives a user input to perform a scan. In response, the interactive media guidance application identifies the next asset (i.e., program or source) in the scan timing sequence (step **420**). At step **430**, the interactive media guidance application assigns a scan tuning sequence number to allow quick navigation to assets within the scan. At step **440**, the interactive media guidance application retrieves information from its program guide data (e.g., program guide data stored in memory **117** of FIG. **1**) for populating the cell of the scan transport bar for the asset. The information may include, for example, identifying indicia for the source and program (title, source name, call letters, etc.), or unrelated information (e.g., advertisements). At step **450**, the interactive media guidance application displays the scan transport control bar cell with the retrieved information. The interactive media guidance application highlights the cell (step **460**), displays the countdown timer for the cell (step **470**), directs the tuner (e.g., tuner **130** or **132** (FIG. **1**)) to tune to the asset (step **480**), and returns to step **420** to display the next cell.

The steps of FIG. **4** may be performed in any suitable order depending on the chosen embodiment for displaying the scan transport control bar. For example, steps **420-450** may be performed for each cell of multiple cells before the interactive

media guidance application proceeds to step **460** and highlights one of the cells. In such an approach, step **480** may return to step **460** forming a loop that is performed for each cell.

FIG. **5** shows illustrative steps for generating a tuning sequence number, such as is done at step **430** of FIG. **4**. In this embodiment, a maximum number of tuning sequence numbers is presumed. While setting a maximum number of tuning sequence numbers may limit the user's ability to tune immediately to all programs in the scan, it may be more user friendly for some users as it does not require a user to remember more tuning sequence numbers than practical. A maximum tuning sequence number of nine or less may also allow the user to quickly select a program from the scan with a single keystroke. Process **500** starts at step **502** where the interactive media guidance application determines whether the maximum number of assignable tuning sequence numbers has been reached. If not, the interactive media guidance application increments the sequence number (e.g., by incrementing a variable stored in memory **117** (FIG. **1**)) and assigns it to the program (steps **504** and **506**). In some embodiments the maximum tuning sequence number is set to the maximum number of cells that may be displayed simultaneously in transport bar **210**. In other embodiments, it is set to a larger number.

In response to determining that the maximum tuning sequence number has been reached at step **502**, the interactive media guidance application resets the tuning sequence number to 1 and assigns it to the program. In some embodiments, the interactive media guidance application may reset the tuning sequence number when the scan reaches its final program and restarts from the beginning. In such embodiments, the same tuning sequence number may be assigned to same program each time it is encountered in the scan sequence. However, if the number of programs in the scan sequence exceeds the maximum tuning sequence number, the interactive media guidance application may not attempt to match the tuning sequence numbers. If the programs in the scan sequence are different in subsequent passes through them (e.g., if a program has started or ended recently), tuning sequence numbers may not match.

FIGS. **6***a*-**6***c* are flowcharts of an illustrative process **600** for implementing transport bar **210** (FIG. **2**) and providing user navigation within a scan in accordance with some embodiments of the present invention. The process starts at step **602**. At step **604**, the interactive media guidance application receives a user input to initiate a scan (e.g., the pressing of a scan button or some other suitable input made by the user with input device **114** (FIG. **1**)). In the embodiment shown, the scan is performed according to user selection criteria received at step **606**. The criteria may have been received from a user when, for example, the user set up a user profile, or in response to a user specifying scan criteria. Programs meeting the criteria are identified by the guidance application at step **608**. This may be performed by, for example, comparing the criteria (stored in memory **117** (FIG. **1**)) with guidance application data received from data source **124** (FIG. **1**) and stored in memory **117** (FIG. **1**). It should be noted that in some embodiments step **608** is performed more than once, such as upon each tune or at the beginning of each cycle of a scan (not shown).

At steps **610** and **612** the interactive media guidance application constructs the transport bar (such as described above in connection with FIGS. **2**-**5**) with the desired number of cells, and highlights the currently-tuned program. At step **614** the interactive media guidance application starts the countdown timer (e.g., timer **292** of FIG. **2**), and waits for a user navigation input (step **616**) while monitoring for the next time to tune (step **617**). When the timer hits its end point (e.g., at t=0), the interactive media guidance application advances the scan (step **618**) by directing tuner **130** or **132** (FIG. **1**) to tune to the next program and by highlighting (or adding) the next cell in the transport bar. At step **619**, the countdown timer is restarted. Although not shown in FIGS. **6***a*-**6***c*, steps **617**-**619** may also be performed while user navigation inputs are being processed.

Should the user enter a navigation input (e.g., by pressing a suitable key on input device **114** or by selecting an on-screen option), the process proceeds from step **616** to a navigation sequence that depends on the type of navigation command input by the user. In response to the user pressing a left or right arrow on input device **114** (FIG. **1**) for example (steps **620** and **624**), the interactive media guidance application will reverse or advance the scan one program as applicable (steps **621** and **625**, respectively), reposition the highlight (steps **622** and **626**), and restart the countdown timer (steps **623** and **627**). In some embodiments, a press of the left or right arrow key will result in moving the highlight without causing a tune. This may allow the user to highlight a program on the transport bar that is not currently tuned. This may, for example, allow a user to retrieve information about any of the programs in the scan sequence without having to tune to tune to that program. It may also allow a user to shift the transport bar left or right to view the names and other details about programs in the scan sequence that are not currently being shown. A similar process (steps **628**-**631**) is performed should the user enter a "last" command by pressing a last button on input **114** (FIG. **1**). In any of these cases, repositioning the highlight may include redrawing all or part of the scan transport bar or shifting new content in from either end.

The interactive media guidance application may allow users to change the speed and/or direction of the scan via reverse and fast forward features. In response to a reverse input (e.g., the pressing of a reverse button on input device **114** (FIG. **1**)) at step **632**, the interactive media guidance application reverses the scan (step **634**). This reverse may be contiguous, unlike the reversing of the scan performed at step **621** where in response to a left arrow the scan is reversed an entire program. In other words, the currently highlighted program may be rewound (e.g., played backwards from a buffer in faster-than-real-time) and the countdown timer may be fast-reversed (e.g., reversed faster than real-time) until the point at which the program was tuned is reached. Then the prior program in the scan sequence is tuned and reversed. After crossing a program boundary, the interactive media guidance application repositions the highlight to the previous program in the scan sequence (step **635**) adjusting the displayed cells as appropriate to the chosen embodiment (e.g., shifting one or more cells into and/or out of the transport bar). To perform the reverse, memory **117** or recording device **118** (FIG. **1**) is used as a real-time buffer for trick play transport control as known to those skilled in the art. In some embodiments, pressing the rewind key may result only in the reversing of the order of the scan. For example, upon receiving the rewind key press the interactive media guidance application may immediately select the most-recently tuned previous program (as with the left arrow key) and then continue in the reverse direction with each countdown timer timeout. A subsequent press of the rewind key may reverse the direction of the scan to the original forward direction, or it may adjust the speed of the scan (e.g., setting the countdown time to three seconds on each tune rather than five seconds). The interactive media guidance application may support a fixed set of

starting values for the countdown timer, and the rewind key may be used to adjust this value in real time.

In response to a fast-forward input (e.g., the pressing of a fast-forward button on input device **114** (FIG. **1**)) at step **637** (FIG. **6***b*), the interactive media guidance application advances the scan. This advance may be contiguous, like the reverse of step **634**—the currently highlighted program may be fast-forwarded (step **638**) and the countdown timer may be fast-advanced (e.g., advanced faster than real time) (step **640**) until the point at which the countdown timer reaches its end point. Then the next program in the scan sequence may be tuned and fast forwarded. After crossing a program boundary, the interactive media guidance application repositions the highlight to the cell for the next program in the scan sequence (step **639**), adjusting the displayed cells as appropriate to the chosen embodiment (e.g., shifting one or more cells into and/or out of the transport bar). In some embodiments, fast-forward scanning is provided only for portions of scans that have been reversed, or after a pause. In others, a second tuner may be leveraged to buffer the next program in the sequence. In response to a fast-forward command, the interactive media application would fast forward through as much of the next program in the sequence as is buffered or can be buffered during the fast-forward operation using a second tuner and memory **117** or recording device **118** (FIG. **1**), until the countdown duration is reached. Then, if buffered, the interactive media guidance application would fast-forward the next program in the sequence, reposition the highlight, and fast-advance the countdown timer. In some embodiments, pressing the fast-forward key may result in the reversing of the order of the scan if it has earlier been reversed using the rewind key. For example, upon receiving the fast-forward key press the interactive media guidance application may immediately select the next program in the scan sequence (as with the right arrow key) and then continue in the forward direction with each countdown timer timeout. A subsequent press of the rewind key may adjust the speed of the scan (e.g., setting the countdown time to three seconds on each tune rather than five seconds). The interactive media guidance application may support a fixed set of starting values for the countdown timer, and the fast-forward key may be used to adjust this value in real time.

It should be noted that in both reversing and fast-forwarding the steps of repositioning the highlight (steps **635** and **639**) may occur before or after adjusting the countdown timer (steps **636** and **640**) depending when in the scan sequence the user issues the command. Repositioning the highlight may include the step of redrawing the scan transport bar or shifting in new programs from either end.

The interactive media guidance application may allow users to pause and restart the scan (steps **641** and **644**). In response to a first pause input, the interactive media guidance application pauses the scan (step **642**). During this time, the transport bar may remain on the screen, and the countdown timer is paused (step **643**). When a play input is received (step **644**), the interactive media guidance application restarts the scan (step **645**), resuming the countdown timer from where it was paused (step **646**). In some embodiments, the interactive program guide may buffer programs of the scan during this time (buffering each program for the amount of the countdown timer).

At step **648** the interactive media guidance application receives an exit user input. In response, the scan transport bar is removed (step **649**). These steps may be performed when, for example, the scan is paused. In some embodiments, such as shown here, the scan may continue without the transport bar (in such embodiments, the scan is ended by a stop user input, steps **650**-**651**). In others, the exit input ends the scan. The interactive media guidance application may re-display the transport bar in response to an "OK" or other suitable input (not shown in the figure).

At step **652**, the interactive media guidance application receives an informational input (e.g., the pressing of an "info" key on input device **114** (FIG. **1**)). In response, the interactive media guidance application retrieves from memory (e.g., memory **117** (FIG. **1**)) and displays additional information for the program of the currently-highlighted cell. The information may be displayed in, for example, an additional overlay located above the transport bar.

In some embodiments, the interactive media guidance application may allow the user to remove (and reinstate) programs from the scan. In response to a suitable input (step **654** FIG. **6***c*), such as the pressing of a "FAV" (i.e., favorites) key on input device **114**, the interactive media guidance application may remove (not shown), or designate for removal (described in steps **655**, **667** and **671**), from future tuning sequences the currently highlighted program in the scan. At step **655** the interactive media guidance application determines whether the currently-highlighted program is already designated for removal. If not, the program is designated for removal (step **667**) and the designated status is visually indicated at step **668**. In some embodiments, the status is visually indicated by a large "X" filling the cell. The cell will continue to stay on the transport bar until it is removed by the normal operation of the shifting of cells in and out of the transport bar (steps **669** and **670**). While the cell remains on the display, the user may de-designate the program for removal by, for example, pressing the "FAV" key again (step **671**), placing the program back into the scan sequence. The interactive media guidance application removes the visual indication of the designation accordingly at step **672**). In some embodiments, when a program is removed from future tuning sequences, the interactive program guide may determine whether the program has changed since the last sequence. If the program has changed, the guidance application may either automatically include the new program in the sequence (if the new program meets any active user scan criteria) or prompt the user to indicate whether it should be included.

The interactive media guidance application may also allow users to navigate within the scan by entering tuning sequence numbers. In response to receiving a tuning sequence number (step **673**), the interactive media guidance application determines the source associated with the sequence number from, for example, a table mapping sources to sequence numbers (step **674**). At step **675**, the interactive media guidance application determines whether the source is relevant to the scan (this step may be omitted for scans that are not based on user-specified or other criteria). If the source is not currently relevant (i.e., the program on the source has changed during the scan to a program not meeting applicable scan criteria) then the interactive media guidance application notifies the user (step **676**), prompting the user to specify whether the scan should continue without the source, or whether the applicable criteria should be suspended and the scan proceed including the new program (steps **677** and **678**). In some embodiments, the criteria may be retained as an exception even if the selected program does not match the criteria. In response to determining that the source is relevant at step **675**, the interactive media guidance application restarts the scan with the selected program (step **679**).

All of the flow charts and processes described above are illustrative. Steps may be added or removed to any of the flow charts, and steps may be performed in any suitable order. The above described embodiments of the present invention are

presented for purposes of illustration and not of limitation, and the present invention is limited only by the claims which follow.

What is claimed is:

**1**. A method for generating a program scan toolbar for allowing users of an interactive media guidance application to navigate programs within a program scan, comprising:

identifying a plurality of programs for inclusion in a program scan;

retrieving information identifying each of the plurality of programs from memory;

generating a cell for each of the plurality of programs, each cell containing the identifying information for a program;

assigning a tuning sequence number for each of the plurality of programs;

displaying the plurality of cells;

performing a program scan in which each of the plurality of programs is successively tuned to for a defined period of time;

receiving a user navigation numerical input comprising a tuning sequence number; and

in response to receiving the tuning sequence number, directing the tuner to the received tuning sequence number and, without further user input, restarting the program scan from the program assigned the tuning sequence number.

**2**. The method defined in claim **1** further comprising highlighting the cell of the currently tuned-to program with a highlight region.

**3**. The method defined in claim **2** further comprising:

receiving a user input to advance the scan one program; and

in response to the user input advancing the scan one program, highlighting the cell of, and tuning to, the next program in the scan tuning sequence.

**4**. The method defined in claim **2** further comprising:

receiving a user input to reverse the scan one program; and

in response to the user input reversing the scan one program, highlighting the cell of, and tuning to, the prior program in the scan tuning sequence.

**5**. The method defined in claim **1** wherein the number of programs and tuning sequence numbers is greater than the number of cells displayed simultaneously.

**6**. The method defined in claim **1** wherein the plurality of cells are simultaneously displayed with at least a substantial portion of the current program of the scan.

**7**. The method defined in claim **1** wherein only a subset of the plurality of cells is simultaneously displayed.

**8**. The method defined in claim **1** further comprising:

receiving an input to remove a program from the scan; and

in response to receiving the input to remove the program from the scan:

designating the program for removal from the scan; and

visually indicating in the cell of the program that the program has been designated for removal from the scan.

**9**. The method defined in claim **8** further comprising:

receiving an input to de-designate a program for removal from the scan; and

in response to receiving the input to de-designate the program for removal from the scan:

de-designating the program for removal from the scan and

removing the visual indication from the cell.

**10**. The method defined in claim **1** comprising:

receiving a user input to reverse the scan; and

in response to receiving the user input to reverse the scan, reversing the scan.

**11**. The method defined in claim **10** wherein reversing the scan comprises playing the currently-tuned program backwards from a buffer.

**12**. The method defined in claim **11** wherein playing the currently-tuned program backwards comprises playing the currently-tuned program backwards from the buffer faster than real time.

**13**. The method defined in claim **10** further comprising:

receiving a second user input to reverse the scan; and

in response to the second user input, adjusting the speed of the reverse of the scan.

**14**. The method defined in claim **10** wherein reversing the scan comprises reversing the order in which the programs are selected in the scan.

**15**. The method defined in claim **1** comprising:

receiving a user input to fast-forward the scan; and

in response to receiving the user input to fast-forward the scan, fast-forwarding the scan.

**16**. The method defined in claim **15** wherein fast-forwarding the scan comprises playing the currently-tuned program from a buffer faster than real time.

**17**. The method defined in claim **15** further comprising:

receiving a second user input to fast-forward the scan; and

in response to the second user input, adjusting the speed of the fast-forward of the scan.

**18**. The method defined in claim **15** wherein fast-forwarding the scan comprises reversing the direction of the scan if it had been previously reversed.

**19**. The method defined in claim **1** further comprising displaying a countdown timer indicating the time until the next tune in the scan occurs.

**20**. The method defined in claim **19** further comprising:

receiving a user input to reverse the scan; and

in response to receiving the user input to reverse the scan, reversing the countdown timer.

**21**. The method defined in claim **20** wherein reversing the countdown timer comprises reversing the countdown timer faster than real time.

**22**. The method defined in claim **19** further comprising:

receiving a user input to fast-forward the scan; and

in response to receiving the user input to fast-forward the scan, advancing the countdown timer in faster than real time.

**23**. A system for generating a program scan toolbar for allowing users of an interactive media guidance application to navigate programs within a program scan, comprising:

a user input device; and

control circuitry comprising memory and a tuner, the control circuitry configured to:

identify a plurality of programs for inclusion in a program scan;

retrieve information identifying each of the plurality of programs from the memory;

generate a cell for each of the plurality of programs, each cell containing the identifying information for a program;

assign a tuning sequence number for each of the plurality of programs;

direct a display device to display the plurality of cells;

initiate a program scan in which the control circuitry directs the tuner to successively tune to each of the plurality of programs for a defined period of time;

receive a user navigation numerical input from the user input device comprising a tuning sequence number; and

in response to receiving the tuning sequence number, directing the tuner to the received tuning sequence number and, without further user input, restarting the program scan from the program assigned the tuning sequence number.

**24**. The system defined in claim **23** wherein the control circuitry is further configured to highlight the cell of the currently tuned-to program with a highlight region.

**25**. The system defined in claim **24** wherein the control circuitry is further configured to:

receive a user input from the user input device to advance the scan one program; and

in response to the user input advancing the scan one program, highlight the cell of, and directing the tuner to tune to, the next program in the scan tuning sequence.

**26**. The system defined in claim **24** wherein the control circuitry is further configured to:

receive a user input from the user input device to reverse the scan one program; and

in response to the user input reversing the scan one program, highlighting the cell of, and directing the tuner to tune to, the prior program in the scan tuning sequence.

**27**. The system defined in claim **23** wherein the control circuitry is further configured so that the number of programs and tuning sequence numbers is greater than the number of cells displayed simultaneously.

**28**. The system defined in claim **23** wherein the control circuitry is further configured so that the plurality of cells are simultaneously displayed with at least a substantial portion of the current program of the scan.

**29**. The system defined in claim **23** wherein the control circuitry is further configured so that only a subset of the plurality of cells is simultaneously displayed.

**30**. The system defined in claim **23** wherein the control circuitry is further configured to:

receive an input from the user input device to remove a program from the scan; and

in response to receiving the input to remove the program from the scan:

designate the program for removal from the scan; and

visually indicate in the cell of the program that the program has been designated for removal from the scan.

**31**. The system defined in claim **30** wherein the control circuitry is further configured to:

receive an input from the user input device to de-designate a program for removal from the scan; and

in response to receiving the input to de-designate the program for removal from the scan:

de-designate the program for removal from the scan and remove the visual indication from the cell.

**32**. The system defined in claim **23** wherein the control circuitry is further configured to:

receive a user input from the user input device to reverse the scan; and

in response to receiving the user input to reverse the scan, reversing the scan.

**33**. The system defined in claim **32** wherein the control circuitry is further configured to reverse the scan by playing the currently-tuned program backwards from a buffer.

**34**. The system defined in claim **33** wherein the control circuitry is further configured to play the currently tuned program backwards from the buffer faster than real time.

**35**. The system defined in claim **32** wherein the control circuitry is further configured to:

receive a second user input to reverse the scan; and

in response to the second user input, adjust the speed of the reverse of the scan.

**36**. The system defined in claim **32** wherein the control circuitry is further configured to reverse the scan by reversing the order in which the programs are selected in the scan.

**37**. The system defined in claim **23** wherein the control circuitry is further configured to:

receive a user input from the user input device to fast-forward the scan; and

in response to receiving the user input to fast-forward the scan, fast-forwarding the scan.

**38**. The system defined in claim **37** wherein the control circuitry is further configured to fast-forward the scan by playing the currently-tuned program from a buffer faster than real time.

**39**. The system defined in claim **37** wherein the control circuitry is further configured to:

receive a second user input to fast-forward the scan; and

in response to the second user input, adjust the speed of the fast-forward of the scan.

**40**. The system defined in claim **37** wherein the control circuitry is further configured to fast-forward the scan by reversing the direction of the scan if it had been previously reversed.

**41**. The system defined in claim **23** wherein the control circuitry is further configured to display a countdown timer indicating the time until the next tune in the scan occurs.

**42**. The system defined in claim **41** wherein the control circuitry is further configured to:

receive a user input to reverse the scan; and

in response to the user input, reverse the countdown timer.

**43**. The system defined in claim **42** wherein the control circuitry is further configured to reverse the countdown timer in faster than real time.

**44**. The system defined in claim **41** wherein the control circuitry is further configured to:

receive a user input to fast-forward the scan; and

in response to the user input, fast-forward the countdown timer in faster than real time.

**45**. A system for generating a program scan toolbar for allowing users of an interactive media guidance application to navigate programs within a program scan, comprising:

means for identifying a plurality of programs for inclusion in a program scan;

means for retrieving information identifying each of the plurality of programs from memory;

means for generating a cell for each of the plurality of programs, each cell containing the identifying information for a program;

means for assigning a tuning sequence number for each of the plurality of programs;

means for displaying the plurality of cells;

means for performing a program scan in which each of the plurality of programs is successively tuned to for a defined period of time;

means for receiving a user navigation numerical input comprising a tuning sequence number; and

means for, in response to receiving the tuning sequence number, directing the tuner to the received tuning sequence number and, without further user input, restarting the program scan from the program assigned the tuning sequence number.

**46**. The system defined in claim **45** further comprising means for highlighting the cell of the currently tuned-to program with a highlight region.

**47**. The system defined in claim **45** further comprising:

means for receiving a user input to advance the scan one program; and

means for, in response to the user input advancing the scan one program, highlighting the cell of, and tuning to, the next program in the scan tuning sequence.

**48**. The system defined in claim **45** further comprising:

means for receiving a user input to reverse the scan one program; and

means for, in response to the user input reversing the scan one program, highlighting the cell of, and tuning to, the prior program in the scan tuning sequence.

**49**. The system defined in claim **45** wherein the number of programs and tuning sequence numbers is greater than the number of cells displayed simultaneously.

**50**. The system defined in claim **45** wherein the plurality of cells are simultaneously displayed with at least a substantial portion of the current program of the scan.

**51**. The system defined in claim **45** wherein only a subset of the plurality of cells is simultaneously displayed.

**52**. The system defined in claim **45** further comprising:

means for receiving an input to remove a program from the scan; and

means for, in response to receiving the input to remove the program from the scan:

designating the program for removal from the scan; and

visually indicating in the cell of the program that the program has been designated for removal from the scan.

**53**. The system defined in claim **52** further comprising:

means for receiving an input to de-designate a program for removal from the scan; and

means for, in response to receiving the input to de-designate the program for removal from the scan:

de-designating the program for removal from the scan and

removing the visual indication from the cell.

**54**. The system defined in claim **45** comprising:

means for receiving a user input to reverse the scan; and

means for, in response to receiving the user input to reverse the scan, reversing the scan.

**55**. The system defined in claim **54** wherein the means for reversing the scan comprises means for playing the currently-tuned program backwards from a buffer.

**56**. The system defined in claim **55** wherein the means for playing the currently-tuned program backwards comprises means for playing the currently-tuned program backwards from the buffer faster than real time.

**57**. The system defined in claim **54** further comprising:

means for receiving a second user input to reverse the scan; and

means for, in response to the second user input, adjusting the speed of the reverse of the scan.

**58**. The system defined in claim **54** wherein the means for reversing the scan comprises means for reversing the order in which the programs are selected in the scan.

**59**. The system defined in claim **45** further comprising:

means for receiving a user input to fast-forward the scan; and

means for, in response to receiving the user input to fast-forward the scan, fast-forwarding the scan.

**60**. The system defined in claim **59** wherein the means for fast-forwarding the scan comprises means for playing the currently-tuned program from a buffer faster than real time.

**61**. The system defined in claim **59** further comprising:

means for receiving a second user input to fast-forward the scan; and

means for, in response to the second user input, adjusting the speed of the fast-forward of the scan.

**62**. The system defined in claim **59** wherein the means for fast-forwarding the scan comprises means for reversing the direction of the scan if it had been previously reversed.

**63**. The system defined in claim **45** further comprising means for displaying a countdown timer indicating the time until the next tune in the scan occurs.

**64**. The system defined in claim **63** further comprising:

means for receiving a user input to reverse the scan; and

means for, in response to receiving the user input to reverse the scan, reversing the countdown timer.

**65**. The system defined in claim **64** wherein the means for reversing the countdown timer comprises means for reversing the countdown timer faster than real time.

**66**. The system defined in claim **63** further comprising:

means for receiving a user input to fast-forward the scan; and

means for, in response to receiving the user input to fast-forward the scan, advancing the countdown timer in faster than real time.

**67**. A method for allowing users of an interactive media guidance application to navigate within a program scan out of the order of the tuning sequence of the scan, comprising:

directing at least one tuner to perform a program scan in which each of a plurality of programs is successively tuned to for a defined period of time;

receiving a user input to tune to a program in the scan that is not the next or prior program in the tuning sequence; and

in response to the user input, tuning to the program in the scan and, without further user input, automatically resuming the scan tuning sequence from that program.

**68**. The method defined in claim **67** wherein the user input is a tuning sequence number.

**69**. The method defined in claim **67** wherein the user input positions a highlight region on a program that is not the next or prior program in the tuning sequence.

**70**. A method for allowing users of an interactive media guidance application to access program information for programs within a program scan out of the order of the tuning sequence of the scan, comprising:

directing at least one tuner to perform a program scan in which each of a plurality of programs is successively tuned to for a defined period of time;

while the at least one tuner continues to perform the program scan, retrieving information specific to at least two programs from program guide data stored in a memory, wherein the retrieved information comprises at least two program titles, and wherein the at least two programs are programs within the scan tuning sequence other than the currently tuned to program; and

displaying, during the scan, the retrieved information, wherein the displaying comprises simultaneously displaying the at least two program titles, and wherein the currently tuned to program is independent of user interactions with the displayed at least two program titles.

**71**. The method defined in claim **70** wherein displaying the retrieved information comprises displaying the retrieved information in a cell of a scan transport bar.

**72**. The method defined in claim **70** wherein:

the method further comprises displaying a plurality of cells in a scan transport bar, wherein each cell includes information about programs within the scan; and

displaying the retrieved information comprises displaying the retrieved information in response to a user selection of a cell of the plurality of cells.

73. The method of claim 70, wherein the retrieving information comprises retrieving the information without receiving user input.

74. A system for allowing users of an interactive media guidance application to navigate within a program scan out of the order of the tuning sequence of the scan, comprising:

a user input device; and

control circuitry comprising a tuner and configured to:

perform a program scan in which the control circuitry directs the tuner to successively tune to each of a plurality of programs for a defined period of time;

receive a user input from the user input device to tune to a program in the scan that is not the next or prior program in the tuning sequence; and

in response to the user input, direct the tuner to tune to the program in the scan and, without further user input, automatically resume the scan tuning sequence from that program.

75. The system defined in claim 74 wherein the user input is a tuning sequence number.

76. The system defined in claim 74 wherein the user input positions a highlight region on a program that is not the next or prior program in the tuning sequence.

77. A system for allowing users of an interactive media guidance application to access program information for programs within a program scan out of the order of the tuning sequence of the scan, comprising:

a user input device; and

control circuitry comprising a tuner and configured to:

perform a program scan in which the control circuitry directs the tuner to successively tune to each of a plurality of programs for a defined period of time;

while the program scan continues to be performed, retrieve information specific to at least two programs from program guide data stored in a memory, wherein the retrieved information comprises at least two program titles, and wherein the at least two programs are programs within the scan tuning sequence other than the currently tuned to program; and

direct a display device to display, during the scan, the retrieved information, wherein the display of the retrieved information includes the simultaneous display of the at least two program titles, and wherein the currently tuned to program is independent of user interactions with the displayed at least two program titles.

78. The system defined in claim 77 wherein the control circuitry is further configured to direct the display device to display the retrieved information in a cell of a scan transport bar.

79. The system defined in claim 77 wherein the control circuitry is further configured to:

direct the display device to display a plurality of cells in a scan transport bar, wherein each cell includes information about programs within the scan; and

direct the display device to display the retrieved information in response to receiving from a user input device a user selection of a cell of the plurality of cells.

80. The system of claim 77, wherein the information is retrieved without receiving user input.

81. A system for allowing users of an interactive media guidance application to navigate within a program scan out of the order of the tuning sequence of the scan, comprising:

means for performing a program scan in which each of a plurality of programs is successively tuned to for a defined period of time;

means for receiving a user input to tune to a program in the scan that is not the next or prior program in the tuning sequence; and

means for in response to the user input, tuning to the program in the scan and, without further user input, automatically resuming the scan tuning sequence from that program.

82. The system defined in claim 81 wherein the user input is a tuning sequence number.

83. The system defined in claim 81 wherein the user input positions a highlight region on a program that is not the next or prior program in the tuning sequence.

84. A system for allowing users of an interactive media guidance application to access program information for programs within a program scan out of the order of the tuning sequence of the scan, comprising:

means for performing a program scan in which each of a plurality of programs is successively tuned to for a defined period of time;

means for retrieving, while the at least one tuner continues to perform the program scan, information specific to at least two programs from program guide data stored in a memory, wherein the retrieved information comprises at least two program titles, and wherein the at least two programs are programs within the scan tuning sequence other than the currently tuned to program; and

means for displaying, during the scan, the retrieved information, wherein the means for displaying comprises means for simultaneously displaying the at least two program titles, and wherein the currently tuned to program is independent of user interactions with the displayed at least two program titles.

85. The system defined in claim 84 wherein the means for displaying the retrieved information comprises means for displaying the retrieved information in a cell of a scan transport bar.

86. The system defined in claim 84 wherein the system further comprises:

means for displaying a plurality of cells in a scan transport bar, wherein each cell includes information about programs within the scan; and

the means for displaying the retrieved information comprises means for displaying the retrieved information in response to a user selection of a cell of the plurality of cells.

87. The system of claim 84, wherein the means for retrieving information comprises means for retrieving the information without receiving user input.

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